QUALITY CONTROL METHODS FOR WELDED JOINTS

COURSE SYLLABUS ABSTRACT

TO THE EDUCATIONAL INSTITUTION'S CURRICULUM

Specialty: 6-05-0714-03 Engineering and technical design and production of materials and products made of them

Profiling: Equipment and technology for welding production.

	STUDY MODE		
	full-time	part-time	part-time (shortened program)
Year	4	4; 5	3; 4
Semester	7; 8	8; 9	6; 7
Lectures, hours	52	12	12
Practical classes (seminars), hours	12	4	4
Laboratory classes, hours	16	4	4
In-class test (semester, hours)		9th semester (2 hours)	7th semester (2 hours)
Pass/fail, semester	7	8	6
Exam, semester	8	9	7
Contact hours	80	22	22
Independent study, hours	128	186	186
Total course duration in hours / credit units	208/6	208/6	208/6

1. Course outline.

The academic discipline contains material on the composition and capabilities of modern methods of quality control of welded joints, as well as the features of their use in welding production.

2. Course learning outcomes

Upon completion of the course, students will be expected to

know:

- defects of welded joints, their impact on the performance of structures, methods for eliminating defects;
- methods, means and technologies of non-destructive quality control of welded joints;
- principles of operation of non-destructive quality control devices;
- safety regulations for the operation of quality control equipment;
- principles of selection of equipment for testing specific welded structures.

be able to:

- select non-destructive testing methods to assess the quality of welded joints of metal structures;
- use modern forms of organizing quality control areas in production;
- develop process charts for testing welded joints;
- use new progressive methods and means of non-destructive testing.

to possess a skill:

- selecting and justifying process modes of specific methods of non-destructive testing of welded joints;
- safe operation during the operation of non-destructive testing technical means.

3. Competencies.

Mastering this academic discipline should ensure the development of the following competencies:
Know the basic methods for assessing the quality of welded joints, types and causes of defects in welded joints and methods for preventing them

4. Requirements and forms of midcourse evaluation and summative assessment.

The following forms are used for current certification: oral; written, reports on laboratory work with their oral defense; reports on practical classes with their oral defense.
The following forms of diagnostics are used for intermediate certification: oral examinations; oral tests.